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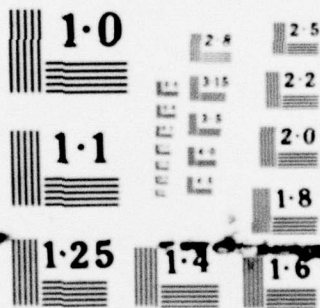
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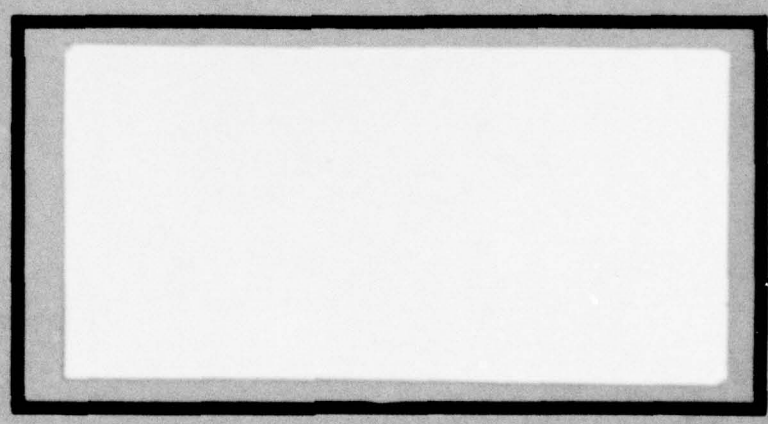
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6 THE ORGANIZATIONAL IMPACT OF THE
IMPLEMENTATION OF A NEW QUALITY
ASSURANCE METHOD IN THE BASE
CONTRACTING ENVIRONMENT.

10 John W. Hargrave, GS-12, USAF

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This study examined the potential impact of proposed AFR 400-28, Base Level Service Contracts, and revised AFR 70-9, Contract Quality Assurance Evaluation, on a base contract administration activity. The specific services contracting areas examined included the functions, skills, skill mix and organizational structure of the base contract administration activity. The key functions impacted by the regulations include the approval and implementation of quality assurance and control procedures along with the training of the affected personnel. To effectively accomplish these key functions, new skills may be required, and organizational specialization may be appropriate in the larger base contract administration activities. The study adapted a methodology developed by Peter Drucker and considered the constraints of job enrichment in designing an organizational model for a large base contracting administration activity. Mr. Drucker's methodology examines the contributions, decision requirements, and the relationship requirements to arrive at a proposed organizational location for each impacted key area. This proposed location is then examined in light of the requirements of job enrichment to establish a final organizational location for each key function. The model developed proposed specialization within contract administration and the conceptualization and specialization of the quality assurance function within the contract administration activity.

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OF A NEW QUALITY ASSURANCE METHOD IN THE
BASE CONTRACTING ENVIRONMENT

A Thesis

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Logistics Management

By

John W. Hargrave, BBA, MBA
GS-12, USAF

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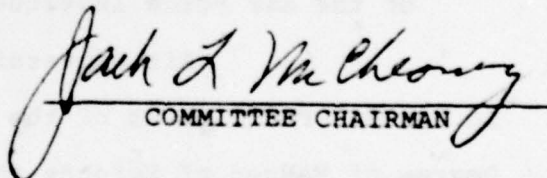
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has been accepted by the undersigned on behalf of the
faculty of the School of Systems and Logistics in partial
fulfillment of the requirements for the degree of

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CHAPTER I

INTRODUCTION

Contracting by the United States Government for services is a highly political issue today in this country (22:2). The substitution of contractual effort for government effort is based on the concept that the United States Government should contract with private industry for services that are commercially available unless it is in the national interest for the government to directly provide its needed products and services (22:8). The identification and evaluation of a particular service as a candidate for contracting out is outside the scope of this paper. The result of such evaluations has been the rapid growth of service contracting by the government (22:2). While the implementation of the policy of contracting out has been criticized (22:23), there is no question that the percent of base support services being contracted has increased significantly in the last several years (22:2).

In response to the increasing importance of contracting in the service area (6:583) the United States Air Force, in August, 1977, established the Air Force Service Contract Advisory Group (AFSCAG) to develop an overall policy for the implementation of all phases of service contracting (8). The Air Force Logistics Management Center

in coordination with AFSCAG developed a draft publication, AFR 400-XX, which has now been numbered as AFR 400-28. The regulation sets forth policy guidance for the writing and administration of service contracts at the base level. Implementing guidance is contained in AFR 70-9, also under revision. This draft regulation is now being tested for certain types of services. Wright-Patterson Air Force Base has been asked and has agreed to test the concepts applicable to the food service facility (9).

Draft AFR 400-28, titled Base Level Service Contracts, is addressed to the development of a contract statement of work and a quality assurance surveillance plan. The interrelating factor, as presented in this regulation, between the statement of work and the quality assurance surveillance plan is job analysis. Job analysis describes each job in terms of the work performed (2:584). The described jobs are then used as the basis of the statement of work and as the basis for the areas to be covered by the quality assurance surveillance plan. The quality assurance surveillance plan uses random sampling, in accordance with MIL-STD 105D, to gather data input. The analysis of the data against the contract standard will result in a rating of a contractor's performance.

Problem Statement

The pending implementation of the new guidance, AFR 400-28, on the administration of base level service contracts has not been evaluated for its potential impact on the organization of the base contracting office. The new guidance may have a significant impact on the functions of the office, the skills required of individual employees, the mix of the skills within the office and the resulting organizational structure of the office.

Background

Contractual Environment

The receipt of a quality product is one of the goals of a contract. Some other goals present are the delivery of the right quantity at the time specified by the contract. The legal meaning of each of these areas is governed by the terms and the conditions of the contract. To provide guidance to Air Force contracting personnel, the Department of Defense and the Air Force have issued numerous regulations. Perhaps the primary one in the contracting area is the Defense Acquisition Regulation (DAR). Section XIV of the DAR is titled "Quality Assurance." This section states that "the contractor is responsible for controlling product quality . . . [20:14-4]."

The government, however, based on the end use, amount, complexity, and other factors, may specify the

scope and management objectives that a contractor's quality control system must address. The scope specified for supply contracts is accomplished through the inclusion of contract clauses in accordance with DAR's stated criteria. For service contracts, no comparable criteria for clause inclusion is stated by the DAR. Clauses are provided in the DAR without criteria for their inclusion beyond the basic requirement of the DAR which requires inclusion of the general clause applicable to all service contracts over \$10,000. This clause (DAR 7-1901.3), requires that ". . . the contractor shall provide and maintain an inspection system acceptable to the government [20:7-442]."

The contractor's establishment and operation of the required inspection system acceptable to the government is monitored by the assigned contract administration function through a series of actions characterized as Quality Assurance. MIL-STD 109B defines quality assurance as: "A planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product conforms to established technical requirements [21:5]."

Government quality assurance actions consist of both a review of the contractor's proposed inspection system and the review of the records and operations applicable to the contractor's operations under that system to evaluate the implementation of the contractor's system. The first action associated with this review is the review of

the contractor's written system with any deficiencies being identified to the contractor and the issue resolved prior to the placing of the plan into operation. Upon the government's tacit acceptance of the contractor's inspection system the government develops its quality assurance plan to guide the government's surveillance effort. The primary actions of the plan are to review contractor-generated records from their inspection system and the actual inspection of selected services during and after performance. The actual plan developed will vary with the service to be performed and the contract provisions applicable to the effort. This review action may be a 100 percent or a random inspection based on a statistically acceptable method. MIL-STD 105D is one acceptable sampling plan of attribute sampling. The result of this sampling will indicate acceptable or unacceptable performance. The applicable basic clause for service contracts is DAR 7-1902.3. This clause states that the contractor is responsible for the correction of the identified defects. Further, if he does not reperform the service or cannot do so because of the nature of the particular service, appropriate deductions will be taken from the contract price.

In addition, the contractor is required to take further management actions to preclude the reoccurrence of the deficient condition. Such management actions will normally require changes to the contractor's inspection

system with the requirement for government reapproval and appropriate adjustment to the government quality assurance plan.

In summary, the contractor is governed in his inspection approach, first by the statement of work and secondly by restrictions (clauses), if any, contained in the contract. If no such restrictions are contained in the contract then the standards existing in the commercial industry are applicable. However, no matter how the government looks over his shoulder the contractor is responsible for presenting the government with acceptable performance. If he does not, then appropriate deductions may be made from his invoice.

Organizational Environment

In placing into operation a system for the administration of contracts, the Air Force has established organizational guidance as to the general structure of a standard base contracting office (18:All-i; 9:2).

This guidance, as stated in AFR 70-8, recognizes the existence of three primary branches in a standard organization. The first is the system management branch, providing all automated interfaces and other general administrative functions for the entire office. The second is the supply branch, charged with the purchasing and administration of all contracts and orders for supplies and

equipment. The third branch is the service branch. This branch is charged with procuring and administering all service, construction and utility contracts. The regulation then states that a separate contract administration branch may be established when authorized. When authorized, this branch will assume certain of the enumerated duties of the other three branches. The guidance for the authorization of a separate contract administration is: "Activities composed of 24 or more personnel are authorized to establish a separate organization with the concurrence of their major command [18:para. All-4d]." It has been suggested that the decision point of twenty-four people to authorize the establishment of a separate branch be raised to at least thirty-six people or that some other decision criteria be considered (11:3). To date, no additional guidance has been published on the establishment of these criteria.

The next step in examining the organizational structure of an activity is to search the literature of organizational design. This search will identify possible alternatives available for the design of an organization as well as identifying criteria that may be used as guidance in judging an existing organization.

One constraint to the establishment of such an approach to organizational design is that the environment surrounding the existing organization may severely restrict

the areas that may be changed as a result of the implementation of any single regulation.

Organizational Design

The structure of an organization is a key to its efficiency (6:519). The interrelationship between the various functions performed by an organization has been discussed, defined and categorized by numerous authors (7:41; 5:200). At least three types of interrelationships have been identified. They are the classical approach or theory of Henri Fayol, the scientific management approach of Henry Taylor and the behavioral theories starting with Chester I. Barnard, and encompassing the theories of Herbert Simon, Chris Argyris, Rensis Likert and Frederick Herzberg (7:53-72; 5:200).

A trend developing in the literature is a look toward the possible combination of these theories or approaches (7:9) into a systematic approach to the total situation. This recognition that the structure of the organization should reflect the strategy of the organization (6:523) can also be viewed as a system approach to management (7:72).

One advocate of the systems approach is Peter F. Drucker. In his book Management: Tasks, Responsibilities, Practices, an approach is presented that may be used to analyze the organizational structure of an activity. This

analysis is based on an interrelated set of activities; and the identification, from the total set of activities, those that are key activities of the organization. A key activity is an activity which requires excellence, a definition of the organization's value to operate, and successful accomplishment to prevent a catastrophic impact to the organization (6:530). The key areas, upon identification, are analyzed for their contribution to the function of the organization. Four general groups of activities, by their contribution, are identified. They are (1) result-producing, (2) support, (3) hygenic and housekeeping, and (4) top-management. The activities or key areas are also analyzed to establish the location of decision points within the total organization based on the factors of: (1) futurity, (2) impact, (3) qualitative factors, and (4) the frequency of decision. To clarify this classification of design, a long-range significant, nonroutine decision about a basic ethical value of the organization would be placed at the top-management level (see Figure 1).

The last area to be analyzed is the relationship between the productive components of the organization. This involves the analysis of who works with whom and gives or receives contributions from whom. The rule to be used here is to "minimize the relationships, but make each count [6:545]." A corollary rule might also be stated that the fewer the number of management levels, the better.


	Futurity	Impact	Qualitative Factors	Frequency of Decision
Top Management	Long-range	Future	Future	Low
Result-Producing	Now	Current	Current	
Support	Now	Current	Future to Current	
Hygenic Housekeeping	Now	Current	Current	High

Fig. 1. Matrix of Contributions to Decision Points

The organization of the identified key jobs, considering the interrelationship of the contribution, decision and relationship for each key job identified by analysis, should be based on a design logic. Three such possible design logics are "work and task," "results and performance," and "relationships" (6:552). "Work and task" may be considered or characterized as the basis of the functional and team design approaches to an organization. The "results and performance" logic is equated to federal decentralization. "Relationships" is compared to the system type organization.

The interrelationship of the resulting structure of key jobs should be based on criteria or specifications establishing the requirements of clarity, economy, the direction of vision, understanding one's own tasks and the common task, decision making, stability and adaptability perpetuation, and self-renewal.

In summary, the chosen organization structure should bring order out of chaos, remove conflict between people over work and responsibility, and establish an environment suitable for team work (7:187).

Mr. Drucker's work can be characterized as results-oriented. The criteria and breakdown presented is looked at as an overall analysis of performance for the organization under study. Inherent to the areas of job analysis which combine to produce the overall organization are two

inputs that combine to achieve the desired product output. These two areas of input are the people and the production aspects of each job. The goal of any organization is to combine the people and the function or productive aspects of the job to achieve an effective and efficient production organization (10:55).

The system approach to management, when applied to a job's structure, looks at the merger of production and people. This merger could be further defined as the technological function of a task-oriented, job approach merged with the social or skill areas of a job. The primary goal of any such total or merged system is to produce effectively and efficiently. Effectiveness is the achievement of a job's purpose, and efficiency is the measure or indicator of how much it costs to achieve that effectiveness when compared to an input or base.

The technological subsystem, the function by which the production objective of the department or firm will be achieved, must be balanced against the desires and requirements of a person's needs for job satisfaction and self-control. This concept of balancing has been called "Theory Y" (10:47). It advanced the principles of integration and self-control and recognized that perfect integration of an organization's requirements with the individual goals and needs is not really possible (10:55).

Also recognizing the variation in human needs is Frederick Herzberg who breaks human needs down into two groups of factors. These two groups are the hygienic factors associated with man's animal nature and the motivational factors associated with man's need to achieve and to experience psychological growth. From the job analysis standpoint the job contents or tasks can be associated with the growth needs of the individual. This approach provides additional criteria in the balancing of needs of people with the needs of production (see Figure 2).

The establishment of goals and objectives is the key factor in the prioritization of each job element to establish the key job elements. In addition, the existence of an organization's goals and objectives is necessary prior to the development of an organization's design logic.

Contracting Areas of Improvement

The United States Air Force, in May, 1977, conducted a Program Management Review of the contract administration area. This review identified several areas that should be addressed for future management action. These areas were organization and staffing, policy and procedures, and personnel. The area of policy and procedures is being addressed by the Air Force Service Contract Advisory Group. That group has, in conjunction with the Air Force Logistics Management Center, drafted AFR 400-28 and

High**

Range
Inherent to
Job Identified

Low*

Futurity Impact Qualitative Factors Frequency of Decision

Long-range	Future	Future	Low
Now	Current	Current	
Now	Current	Future to Current	
Now	Current	Current	High

Top Management

Result-Producing

Support

Hygienic House-keeping

*Automatic Hygiene Factors; System 1 Specialization

**System 4 (Likert); Motivational Factors (Herzberg)

Fig. 2. Matrix of Contribution and Decision Points to Personal Needs

proposed a revision to AFR 70-9 (8; 6). The area identified as personnel is primarily concerned with the training of inspection personnel designated TRCOs (QAEs)¹ in accordance with AFR 70-9. This area is being addressed by the Air Force Logistics Management Center and is currently under development (11:7). This leaves the area of organization and staffing. That subject area is identified in the problem statement of this thesis as its area of primary interest.

Manning

The current Air Force manning standard for a base contracting office was issued in 1969 (12:1). Since that time there have been significant increases in the size and changes in the composition of the workload of a base contracting office. Service contracting is increasing in importance within the Department of Defense (11:2).

The Air Force has established a standard organizational and manning standard governed by the amount of activity associated with mission and organization at a particular site (12:p.1251S-5; 18:3-3, All-1 to 3). The manning standard is based on the application of time factors to standard task definitions (16:7). These time factors were tested to identify significant independent

¹See Glossary for commonly used terms and abbreviations.

variables. The significant variables were then applied in an appropriate equation to determine a gross manpower equivalent (12:p.1251S-9) or manning size. Once a manning size is determined, a breakout of job skills and grade levels required will be established (16:7). No alternatives to manning size or job breakout are available without approval of a deviation from HQ USAF. The current manning standard is now under revision (9:4).

Scope

This research is confined to the identification of the impact the regulatory changes (AFR 400-28) will have on the functional tasks, skills and skill mix and organizational structure of a separate contract administration activity within a large base contracting office such as the 2750th ABW, Contracting Division, Wright-Patterson Air Force Base, Ohio.

Research Objective

The objective of this research is to examine the potential impact AFR 400-28 and revised AFR 70-9 will have on a contract administration activity in the areas of the functional tasks to be performed by the activity, the skills, and skill mix of the personnel and the organizational structure of the office. This study is applicable primarily to large base contracting activities such as the

2750th ABW, Contracting Division, Wright-Patterson Air Force Base, Ohio.

Research Questions

1. What are the present functional requirements governing the administration of base level service contracts?
2. What is the impact of the implementation of AFR 400-28 and revised AFR 70-9 on the base contract administration activity's functional tasks?
3. What skills and skill mix are currently authorized for base level service contract administration?
4. What skills and skill mix are conceptually required by AFR 400-28 and revised AFR 70-9?
5. What organizational structure or placement is currently authorized for the administration of service contracts at the base level?
6. What organizational structure or placement, as a model, is appropriate for the impacted tasks and skills in the administration of base level service contracts?
7. What is the impact of the application of this organizational model on service contract administration at a large base contracting office such as the 2750th ABW, Contracting Division, Wright-Patterson Air Force Base, Ohio?

CHAPTER II

METHODOLOGY

Introduction

The methodology utilized in answering each of the research questions varied in relationship to the subjectiveness of the area addressed by each question. Current regulations cover in extensive detail the functions, skills and skill mix of the contracting organization in general. The approach utilized was to narrow and limit the regulations examined so as to address only the administrative area pertaining to service contracts issued by the base contracting office.

The review of any regulation to identify the areas to be analyzed requires an objective approach to identify areas associated with the research question. In addition, during the analysis of each area investigated, it was absolutely essential to establish and maintain the objective approach necessary to meet the standards of the school and the Air Force research community.

Functional Tasks

The identification of the tasks associated with services contracting currently placed within the contract administration activity was achieved by reviewing existing

regulations addressing the job to be done by that office. The regulations under review established both the objectives of the office and the functions necessary to achieve the accomplishment of the objectives. The primary tool to identify the strategy was the DAR (ASPR), primarily sections and paragraphs 1-400 and 20-700. The Air Force has taken the objectives or strategies and identified the functions associated with these objectives as goals in AFM 26-2 and AFR 70-8.

The second aspect of the functional analysis is to identify those functions impacted by the implementation of the AFR 400-28. The impact is constrained by the regulatory environment of the office. The key to the resulting impact analysis is to maintain objectivity in the identification of the functional areas affected by the regulation. The identification and impact of the change to each identified functional task is key to the future creation of an organizational model since only those tasks that change need be discussed in the model that is the result of this paper.

Skills and Skill Mix

The Air Force has established a skills identification system for both the military and civilian segments of their employees. The military segment uses the Air Force Specialty Code (AFSC). The civilian segment uses a government-wide civilian system of occupational codes which are

broader in scope because of the wide diversity of personnel covered. The identification of the existing skill codes associated with the identified functions are in accordance with Volume II of AFM 25-5 and the manpower standard of Volume II of AFM 26-3. These regulations provide the guidance necessary to identify the involved skills.

The next aspect of this analysis is to identify the new or existing skills that are impacted by the new regulation. Additionally, associated with this process is the possibility that more than one skill may be required to perform an identified function. The mixing of skills may also be affected since the new regulation may change the emphasis placed on a particular skill as well as adding possible new skills.

This evaluation of affected skills and possibly a change in mixture will identify the positions involved or impacted by the new regulation. Further, this identification of associated skills, along with the previously identified functions, is the last step necessary to evaluate the organizational impact of the implementation of the regulation.

Organizational Structure

The evaluation or development of an organizational structure is dependent upon the environment surrounding the area of the organization to be structured. In the case

in point, where the examination is on the impact of a regulation on a lower level of the structure, within the total base function, the constraints present severely limit the latitude for change. The functions, skills and skill mix with very few exceptions are severely constrained in the evaluation and analysis of the structure.

The primary guidance is provided by Sections I and XX of the DAR. Within this general guidance, AFM 26-2 and AFR 70-8 provide organizational guidance in both structure and function or tasks.

With completion of the identification of the existing organizational structure, an analysis of the impact of the regulation is possible. The analysis will be based upon the identification of those key areas that are impacted by the new regulation.

The proposed merger of the tasks, skills and skill mix and existing organizational structure must be governed or constrained by some methodology. The actual methodology utilized was based on the approach set forth in Chapter I of this paper.

The method of approach presented in Chapter I is an incremental approach addressed by this paper only to the identified areas impacted by the implementation of the regulations under study (see Figure 3). The first step in the approach was the identification of the placement of the function within the total organization's structure using

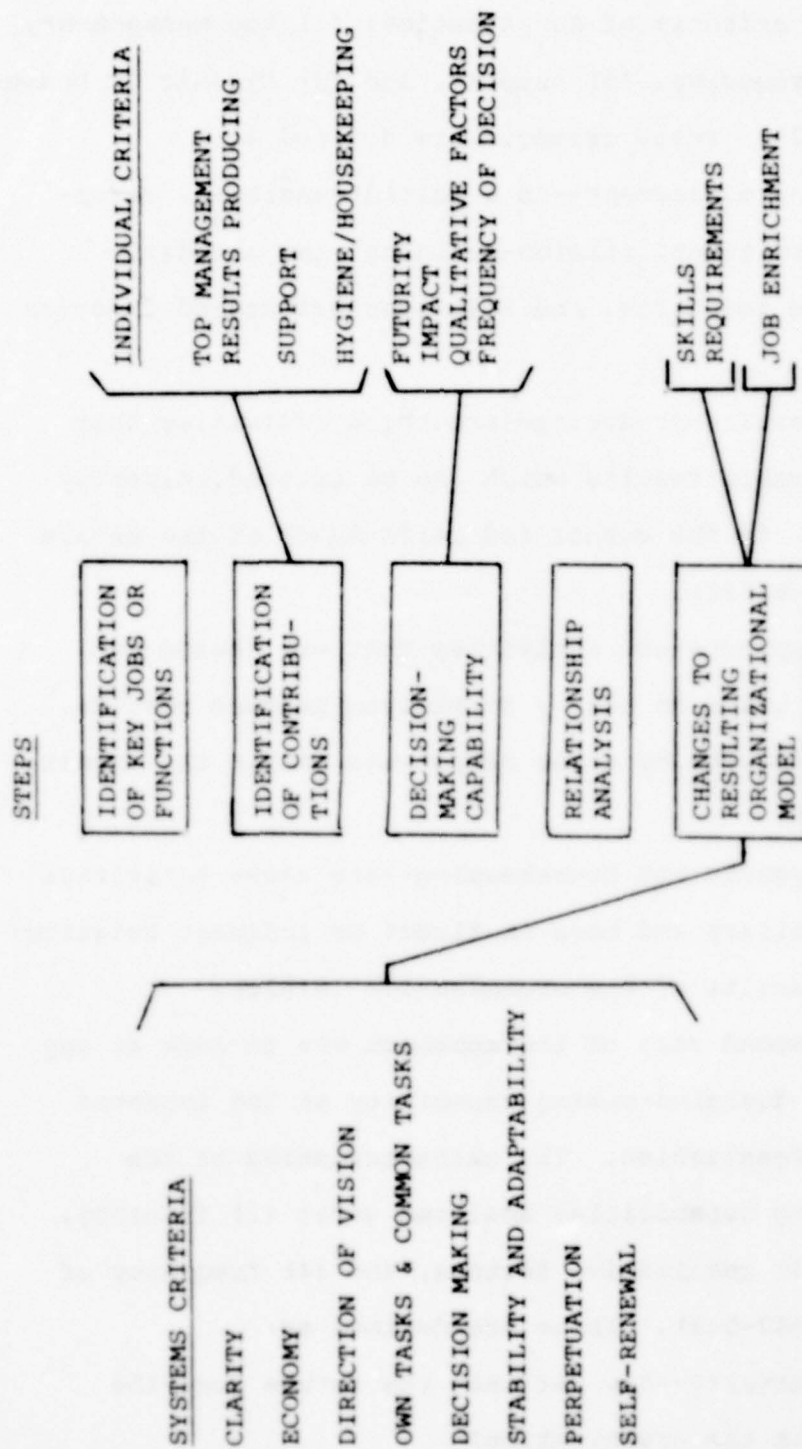


Fig. 3. Organizational Model Development

the following criteria of contribution: (1) top management, (2) results-producing, (3) support, and (4) hygenic or housekeeping (6:532). These criteria are defined as:

1. Top management--is a multidimensional, recurrent but intermittent, mission-defining, and standard-setting, human resources, and relations-orientated function (6:611-612).

2. Results-producing--are those activities that produce measurable results which can be related, directly or indirectly, to the output and performance of the entire organization (6:532)

3. Support--are activities that are needed and essential but which do not by themselves produce results. Their output is used by other components within the organization (6:532).

4. Hygenic and housekeeping--are those activities which are ancillary and have no direct or indirect relationship to the results of the organization (6:532).

The second step of the approach was to look at any change in the decision-making capability of the impacted area of the organization. The characteristics of the decision-making capabilities analyzed were: (1) futurity, (2) impact, (3) qualitative factors, and (4) frequency of decisions (6:543-545). These are defined as:

1. Futurity--how far into the future does the decision commit the organization?

2. Impact--total system considerations or impact on others.

3. Qualitative factors--ethical values, social and political beliefs.

4. Frequency of decision--the rate of occurrence of decision making in the identified function.

The third step was to analyze any revisions as a result of the functional changes or of the decision levels on the relationship of the impacted manager with existing counterparts in other organizational areas. The rule governing the analysis was that the number of relationships should be minimized while having each one count (6:545).

The result will be a tentative organizational location for each function. However, superimposed over this analysis of functions and locations based on decision-making capability is the impact each change will have on the people performing the function or task. When this factor is included in the organizational structure the result should be a classification of functions as to their capability to be utilized to establish the most individual self-control or job control available to the individual in the situation under study. This means that the location of functions is impacted also by the factor of human desires or motivations as set forth by the concept of vertical job enrichment. Vertical job enrichment is the increasing of an individual's self-responsibility and self-control. This

type of job enrichment can be contrasted to horizontal job enrichment which is the addition of more of the similar type of work (3:458). Vertical job enrichment will allow the employee to have more responsibility for the planning, organization and inspection of his own work (3:458).

The final placement of a particular function is a complex decision looking at key activities, at contribution, at decisions, and relations to establish a possible location for a particular function within the organization.

2750 ABW Application

The impact model developed so far was based only on Air Force-wide regulations. To evaluate the impact of the regulation on an operational command, the command and base regulations must be reviewed. This review will identify any further restrictions or conditions established by the involved command or lower level organizations. This review established that both the command, Air Force Logistic Command, and the 2750th ABW have published documents that impact the area of the administration of service contracts by the contract administration branch of the Contracting Division of the 2750th ABW. Specifically, AFLC and the 2750th ABW have supplemented AFR 70-9 to clarify and define areas left open by the basic regulation. In addition, the 2750th ABW, in WPAFBR 23-1 has defined the

organizational and functional structure of the Contracting Division of the wing.

The impact of the new regulations, if any, on these existing documents will be included in the model tested at the 2750th ABW. The evaluation of the model will be conducted in two phases. The first will be a review of the results of the test implementation of AFR 400-28 at the dining facility at WPAFB. The second phase will be interviews with the Commander of the Civil Engineering Squadron and the Chief of the Base Services Division. These divisions are currently involved with existing contracts under the current version of AFR 70-9 or have initiated solicitations under AFR 400-28. Also interviewed will be the Deputy Chief of the Contracting Division. Each Division Chief will be presented with the proposed organizational model along with proposed criteria for its use. They will be asked to provide comments as to the model's effectiveness, applicability and composition in light of their views of the achievement of their assigned function or responsibilities. Each interview will be conducted in accordance with the framework set forth in Appendix B.

Summary

The evaluation of the impact of the implementation of AFR 400-28 on the base contract administration activity is to be conducted in a stepwise process. The first area

is the identification of the functions of the office with the primary emphasis on those functions impacted (added or deleted) by the regulation. The second area involves identifying skills appropriate to the identified function, again with the primary emphasis on those skills associated with the new regulation. Upon completion of this identification the combining of these two areas into the final organizational structure must be undertaken. This combination would integrate the identified changes in functions and skills into the existing organizational structure in a manner that would avoid the suboptimization of the combination of people and production after the implementation of the new regulation. This integrated organization structure would be identified as a model. This model will then be tested in the environment of the 2750th ABW contract administration office. The resulting evaluation of the model within the 2750th ABW will provide a first stage in the evaluation of the impact of the new regulation. Evaluation of this impact could lead to the statement of a general framework or criteria for the implementation of the regulation at any base contracting office.

CHAPTER III

FUNCTIONS AND SKILLS

Introduction

The identification of the functions and skills present and impacted by the regulation (AFR 400-28) requires the review of a number of regulations. The most general of these in scope is the Defense Acquisition Regulation (DAR). This regulation provides guidance for the total contractual process. The guidance on contract administration is contained in Sections I and XX of the DAR. Section I, paragraph 406, lists all the functions that are to be automatically performed by an administrative office on an assigned contract. As of August 1978 there were seventy-eight identified administrative functions covering a broad range of administrative activities. These activities include production and quality assurance actions as well as contract modification and reviews addressed to the contractors' financial and production capability. Each area identified is also addressed by a separate section of the DAR. The second section addressed to contract administration in the DAR is Part 7 of Section XX. Here is stated the policy for the assignment or retention of contract administration. The assignment policy concerning contracts for base support is expressed as one of the exceptions to

the general policy of assigning all contracts that will not be performed within the physical control of the contracting office. This allows the base to administer all contracts that do not require field contract administration.

Following the review of the DAR, a survey of applicable Air Force regulations was also conducted. The regulations identified as addressing specific functions are AFM 26-2 and AFR 70-8. They are associated documents in that they both state base contracting functions. AFM 26-2 is the more general of the two as it addresses all the organizational components of Air Force units. The more specific of the two and a regulation, AFR 70-8, is also the more current of the two and will be used in the examination of the functions for this thesis.

The basic functions of the office are defined again in general terms in AFR 70-8, implying at the least that specific functions stated in DAR are to be applied on an exception basis to contract administration within the base environment. For service contracts the contract administration branch is responsible to:

Conduct preperformance conferences jointly with the appropriate buying branch [14:2].

Administers orders and contracts. Monitors contractors' performance under construction and service contracts. Resolves contractor performance problems in close coordination with the technical representative of the contracting office (TRCO) or inspector. Issue "cure" notices, "show cause" letters to contractors and processes contractor claims, disputes and contractor terminations when required [14:2].

Negotiates and prepares contract modifications
[14:2].

These responsibilities are general in function when compared to the areas of production or quality assurance as set forth in the DAR. Certain areas are mentioned but no specific actions are discussed. This generalized approach is in line with the regulatory policy of applying more extensive contract administrative actions to higher value contracts.

In addition to the general guidance of AFR 70-8, specific guidance is provided to the contract administration office on the functions of the technical representative of the contracting officer (TRCO) by AFR 70-9. While this regulation is under revision to better coordinate with the AFR 400-28, the current regulation contains specific guidance to the contract administrator on the training and use of TRCOs. The training of the TRCOs is addressed to the orientation of a technically trained person to the actual terms and conditions of the contract. AFR 70-9 requires that the contracting officer approve contractor evaluation plans for consistency with the terms of the contract. The regulation also requires that a meeting be conducted periodically between the contracting office and the functional area chief.

In summary, general functional guidance is provided by the DAR. This guidance is narrowed by AFR 70-8

and AFR 70-9 but still remains a general approach to contract administration when in the base environment. This approach might be stated that base contracting administers contracts on an exception basis.

Impacted Functions

The next step in providing answers to the research questions is to identify the functions impacted by the implementation of AFR 400-28. This regulation presents a systems approach to contract performance that has to be separated into the pre-award and post-award areas if the impact on the contract administration function is to be analyzed. Since this segregation is arbitrary, some functions, such as the creation of the surveillance plan overlap when contract administration is a separate branch. This overlap is caused by the fact that the contract administration branch acts as a successor contracting office and does not maintain the usual administrative contracting officer to primary contracting officer relationship.

The primary impact of the AFR 400-28 on the contract administration function is in the area of providing or requiring a systematic approach to establishing that a service contractor is performing in accordance with the terms of the contract. This action is one of applying quality assurance principals to base level service contracts.

One resulting or separated function is the creation and approval of the quality assurance surveillance plans. AFR 400-28 and AFR 70-9 provide no separation of the pre-award and post-award functions. The result is a requirement for coordination not existing where there is no separate contract administration function. This function of approval would appear to belong in the contract administration area since the plan will be utilized by only the contract administration function. The location of this approval is also supported by DAR 14-203. Associated with the surveillance plan but a separate function is the identification of key performance indicators and the associated deductions that will be placed in the contract. These indicators and deductions must be rational and reflect actual levels of current performance.

A second major area of impact is the training of the Quality Assurance Evaluator (QAE) (TRCO) in the contents of the contract and the implementation of the surveillance plan. This plan requires the use of MIL-STD-105D with random sampling and associated actions. This plan, when implemented, should create a true picture of contractor performance. The methodology to actually implement this plan by creating an unbiased random inspection record is completely new to the base contracting function and to the QAE (TRCO). The increased emphasis on random sampling appears to remove any latitude in inspection actions thus

decreasing the actual inspector's qualifications for functional knowledge and increasing the requirement for contracting knowledge.

An associated area to the creation of the quality assurance plan is the requirement for contract administration to review and approve a contractor's quality control plan. This is achieved by the conversion of contractual quality and delivery requirements into a contractor's inspection system. The review of a contractor's quality control system is another area where the contract administration function has no existing requirement for the specialized knowledge of the adequacy of a contractor's inspection system.

A last area of impact is the requirement for the contract administrator to make random inspections on the QAE (TRCO). The creation of the administrator's plan and the ensuing site visits with their requisite knowledge of the full quality assurance surveillance plan is also a new requirement for the contract administrative function.

Existing Skills

The existing skills, either military or civilian, are general in nature. They address negotiation, pricing, approving a system, and generally require a broad understanding of the DAR. There is no mention of any specific skills such as must be possessed by the individual to enable that person to perform a required function. This is

because the primary task of a base contract administration office is to monitor on an exception basis contractor performance to anticipate delivery problems or completed performance; not to approve, monitor or review a contractor's on-going system. Thus the primary skills currently present are a good ability to analyze and to communicate and to guide other people to rational decisions about contractual matters.

Impacted Skills

The skills impacted are those of the contractor administrator and the QAE (TRCO). The result is the requirement for the detailed knowledge about surveillance actions, random sampling and employee motivation necessary to implement a program of quality assurance as established by AFR 400-28 and implemented by AFR 70-9. Within the civil service system there exists an entirely separate group of position classification standards for quality assurance (GS 1910). There is no equivalent career field within the military personnel system. As a point of note, major contract administration activities, such as DCAS or AFCMD and AFCMC, have an organizational structure that recognizes such separate skill requirements. These separate functions with their associated skill requirements were created because of the surveillance requirement for the type and size of contracts administered by the respective

organizations. Thus, in summary, the requirement for the separation of the identified function is one directly associated with the manpower requirements for the specialized skills. This separation is contrasted with the generalized skill requirements of the current base contract administration office performing quality assurance actions only on a limited or exception basis.

Skill Mix

The increase in manhours associated with the creation, training and implementing of the quality assurance surveillance plans and the increase in service contracting by the Air Force, has created an increased requirement for people specializing in the areas associated with government quality assurance actions. One alternative to increasing the skill level or knowledge of the entire office is to create a concentration of the specialized skills in a smaller group of employees. These persons would handle only service contracts meeting the dollar thresholds of AFR 70-9. In a large office it might be possible to have enough specialized people so that the skill need might support the inclusion of quality assurance, GS-1910, personnel in the skill structure of a base contracting administration function.

Summary

The implementation of AFR 400-28 through AFR 70-9 has created a requirement for new specialized functions

associated with the contract administration activity of the base contracting office at all bases within the Air Force. The implementation of the function of the approval of the contractor's inspection plans and the government's surveillance plans in association with the internal requirements for the contract administration random inspection action has created companion requirements for new skills within the base contracting function. The actual addition of the function and associated skills to a particular office creates an opportunity for a specialization of skills that may reorganize the existing skills plus add new skills. The mixture has the potential for a more efficient operation if supported by the value of the number of service contracts present in a particular contract administration office.

CHAPTER IV

ORGANIZATIONAL IMPACT AND MODEL

Introduction

This chapter examines research question numbers 5, 6 and 7. The examination combines the identified functions and skills from Chapter III to develop an organizational model. In conclusion, the chapter adapts and tests that model in the environment of the 2750 ABW. As in Chapter III, the first research question (number 5) is addressed to the examination of the current organizational structure for a contract administration activity within the Air Force.

Current Organizational Structure

The current organizational structure set forth in AFM 26-2 and AFR 70-8 is the basis for the discussion of Chapter III on existing functions. As stated in AFM 26-2, within the Air Force there are a number of standard organizations associated with the mission assigned to that activity. The basic or primary field organization within the Air Force is the squadron (18:p.2-3). Squadrons may be combined into Groups or Wings depending on the particular mission of the base contracting activity for each location. The composition and size of each contracting activity will vary

with the total size and functions of the units supported. AFM 26-2 and AFR 70-8 set forth a standard organizational location within the base structure and the contracting office for the contract administration activity. The head of the contracting activity in a support wing is a senior staff officer who reports directly to the base commander. In some operational wings, however, this officer falls under the logistic squadron along with the supply and transportation functions.

Within the base contracting activity, the standard organization is that of three branches with combinations or further separation authorized based on the size of the office. As stated previously, a separate contract administration branch is authorized for larger offices. The three standard branches are separated based on the area of contracting that they support. The supply and service/construction buying branches deal only with those types of procurements. The third branch is addressed to systems management. A contract administration branch assumes the post-award responsibilities of the service, supply and the systems management branches without the opportunity for specialization. Therefore, the contract administration activity provides a generalized approach on an exception basis to the administration of all retained supply and service contracts.

Organizational Model

To answer the next research question, question number 6, this paper first identified the functions affected by the implementation of AFR 400-28 and revised AFR 70-9. The identified functions are then analyzed utilizing the stated methodology from Chapter I. The result of this analysis is an organizational model applicable to the Air Force base contracting environment in general.

Those aspects of the contract administration function changed by the implementation of AFR 400-28 were identified in the first section of the preceding chapter. In summary, the impacted functions were identified as the approval and quality assurance effort associated with the government's actions to insure the government receives the services for which it contracted. These functions require a higher level of knowledge and concentration of activities than previously associated with the administration of service contracts. A second area identified was the responsibility of training the contract administrator and the quality assurance evaluator in the new methods incorporated in AFR 400-28. A further aspect of the consequence of the implementation of the new regulation is the fact that contract administration is charged with the general responsibility for the performance of the new quality assurance method on every designated contract on the base. Each functional area is required to support this requirement by furnishing personnel trained

in the skills of a QAE (TRCO). However, the QAE is also responsible to a functional area chief for his total performance. That part of the QAE function associated with the quality assurance effort might be appropriately considered in the proposed organization if such inclusion can achieve savings in manpower or result in more efficiently performed quality assurance actions.

The first step in the detailed analysis in conformance with the methodology is to place each of the identified functions in their proper location or position based on contributions. The functions of approval and inspection are "result-contributing." The training requirement falls in the "support" area.

The second area to be examined is those characteristics associated with the decision-making capability of the identified impacted functions. The requirement for approval is on a longer or infrequent basis; however, the areas of impact, qualitative factors and futurity of decisions for the approval function are all current in nature. This conflict in location would place the approval decision above the contract administrator but still not in any category associated with top management because of the currency of the other three areas.

In analyzing these decisions, certain restraints are present with respect to the approval function. The government restricts its authority of approval to the actions

of certain designated agents called contracting officers. The placement and use of this title is restricted to only senior and experienced personnel. This designation of authority to bind the government creates an obligation on the part of the government. The conclusion is that any approval of this nature is the responsibility of a contracting officer. This requirement acts to constrain where in the final organizational structure the approval function is placed. The location of the inspection requirements for both the contract administrator and the QAE are similar in that they are all current with respect to futurity, impact, qualitative factors, and frequency of decisions. The location of the training function should be considered in one of the existing service areas such as the civilian personnel activity.

The last area addressed by the organizational model is that of relationships. The relationships within contracting seem clear. The contract administrator, working in conjunction with or for a contracting officer, establishes a day-to-day relationship with a contractor who is performing services under a particular contract. The contract was created at the request of a functional area chief stating to procurement that a contract was necessary to provide the service, and following a determination that it was less costly to perform the service through a contract. Once that decision is finalized, the contract administration office is

placed in the middle to create a buffer between a functional organization that previously directly controlled the resources performing the work and the contractor who is performing in accordance with a legal document requiring a series of actions which may not have the approval of the functional personnel either as to method or as to product.

A clear line of authority is not evident when analyzing the current position of the QAE. That person, while doing inspecting, is also involved with the creation of requirements which may involve new work for the contractor. Further, the QAE is responsible to the functional area management for his promotions and other job-related personnel actions. Thus, a situation is created wherein the relations are not clear and, in fact, the inspection function may be placed in a subordinate role to that of the functional area pressures to get the job done. The problem of the subordination of quality to production pressures is not unique to the base contracting environment and has been an area of management change in American industry in the last fifty years (3:192). The result of the analysis of relationships (i.e., minimizing the number of relationships applicable to the QAE while having each one count) can be achieved by moving the quality assurance or inspection function from the functional area requesting the contract to the contracting area.

The last step is to examine the impact on the skills associated with the new requirement for approval and new

inspection requirements on contracting along with the new training requirements on an appropriate service organization. These requirements create the need for new specialized skills both in contracting and in quality assurance. As stated earlier, since the new skill requirements in contracting are a significant part of the total work load of the administrator of service contracts, specialization would be appropriate. This specialization would allow an administrator to concentrate his efforts on a systematic approach to the implementation of the surveillance plans to provide uniformity and continuity to the established method of operation.

In the case of quality assurance, especially when vertical job enrichment is considered, the creation of a separate organization controlling this work to the maximum extent is a definite possibility. The creation of a separate organization would be correlated to the work load of the base and the size or importance of the services under contract. A further area of consideration for the creation of a separate organization is the requirement for the specialized knowledge necessary to the performance of the quality assurance function.

In summary, the general organization model is one of a specialized group, team, or section within contract administration assigned those contracts subject to the concepts of AFR 400-28. It also encompasses retraining the

appropriate contracting officers in the methodology of AFR 400-28. It further consists of a group, team, or section of quality assurance personnel, within the organizational structure of the contracting office. This quality assurance activity would perform all inspection actions associated with the administration of all contracts subject to the procedures of AFR 400-28. This organizational approach is preferred to a similar concentration of the quality assurance function in a noncontracting organization, such as civil engineering, because of the failure to keep separate lines of responsibility and to eliminate a possible conflict of interest. The concentration in contracting also should result in the most economical utilization of the quality assurance work force.

2750 ABW Model and Application

The last research question, question number 7, addressed itself to a test of the application of the generalized model to the 2750 ABW. To apply and test the model required a review of its applicability, an examination of the test of the AFR 400-28 procedures at the airman's food service facility, and selected interviews to identify problems and constraints in the future application of the model.

To apply and test a model applicable to the 2750 ABW, the first step was to establish the existence of any

additional restraints that would limit the development of a specific organization structure. Examination identified that AFLC had published AFLCR 70-19. This regulation does not restrict the organizational alternatives to be considered in applying a model to the 2750 ABW. AFLC had also published a supplement to the current AFR 70-9. That supplement contains certain procedures that will have to be modified to fit in with the policy and procedures of AFR 400-28. Since AFR 400-28 is published by a higher level command, the conflict identified will have to be rectified by AFLC.

The model developed is thus relatively free of constraints created by the existing organizational structure of the base. Further, the contracting division has already separated contract administration into a separate branch equal in organizational position to the base contract buying branch. Within the contract administration branch there are currently three sections. These sections perform administration of construction, services and large supply contracts, and small purchases and delivery orders, respectively. The services section of the contract administration branch has grown from eight people to fourteen people with the absorption of contract maintenance and the addition of new service contracts (4). Further, two new positions will be added to support an increased work load in the fall of 1979. The increased work load has strained the management capability of the supervisor and contracting officer.

As a further indication of the impact of the implementation of AFR 400-28 on the administration of service contracts, as of August 1979, only one contract utilizes AFR 400-28 procedures out of sixty-three contracts administered under the current AFR 90-9 (4). The one in operation is the food service contract for the full operation of a single dining hall. As identified previously, that contract has been involved in a test under AFSCG authority since February 1979. The results of that test are discussed in a later portion of this chapter. In conclusion, the model developed by the analysis of the general situation as applied to the 2750th ABW supports the applicability of the concept of specialization and centralization as applicable to the administration of service contracts.

2750 ABW Test and Interviews

To further analyze the impact of the regulation, a review of the test results of the implementation of the methodology of AFR 400-28 in the 2750th ABW food service facility was conducted. This review concluded that the inspections conducted under the methodology of the test generated more accurate records reflecting a greater number of deficiencies identified with fewer manhours of work. However, the manhours spent were spread out over the entire time sequence of operations. Additional areas addressed by the report were the training of both the administrator and QAE

and the additional time required for the administrator to accomplish his job during other than normal duty hours.

The interviews, conducted following the format set forth in Appendix B of this thesis, established that each interviewee, upon familiarization with the problem, approach, and model of the thesis, recognized that AFR 400-28's impact on the QAE would be to decrease his discretion or subjectiveness in evaluating the contractor's performance. Each interviewee had a varied perception of the impact on the particular QAE associated with his respective functional area. This variation was based on the interviewee's perception of the feasibility of writing an objective surveillance plan. In response to the decrease in the variability of the QAE's job, one functional area considered giving additional responsibilities to QAEs. The giving of additional work to the QAE was presented as an alternative to the separation of inspection and requirements determination and the resulting move of quality assurance into the contracting office. All interviewees felt that the regulation was a needed step and was here to stay. The interviewees from the Services Division and Civil Engineering Squadron did not care to offer any comments as to the impact of the regulation on the contract administration of service contracts other than to agree that the identified impact and the proposed model appeared reasonable, based on the presented analysis of the regulation. The interviewee from

the contracting division agreed with the concept of specialization and recognized that the contract administration section of the contracting division had grown from eight to sixteen authorizations in the past two years. This growth had created pressures to reorganize prior to any impact created by the implementation of AFR 400-28. In discussing the performance of a particular function, both noncontracting interviewees felt that to segregate the inspection function from their area of authority would have an adverse impact on their designated mission accomplishment. On the other hand, both recognized the manpower constraints and the concept of specialization and centralization when the possibility of an adverse impact on the QAE's job was considered.

In conclusion, each interviewee adopted a cautious attitude but recognized a potential problem to organizational performance. They did not bring up additional areas for discussion. All interviewees discussed fully and candidly their opinions concerning the regulation and the organizational model presented.

Summary

The model developed was initially received with reservations, but without active opposition, by each manager interviewed. Each of the managers interviewed recognized that any organizational change must be analyzed in light of the impact on the people involved, in addition to the impact

on decisions and relationships. This recognition supported the thesis methodology. However, without a detailed analysis of a particular operation to demonstrate the manpower savings, full acceptance of the presented model did not appear likely.

CHAPTER V

CONCLUSION, SUMMARY, RECOMMENDATIONS

Conclusion

The objective of the research was to examine the potential impact of AFR 400-28 and revised AFR 70-9 on a contract administration activity's function, skills and skill mix, and organizational structure. To study this area, seven research questions were stated and answered.

Research questions 1 and 2 addressed the identification of the current functions of contract administration, and the identification of those specific functions that would be impacted by the implementation of AFR 400-28. The functions identified were: (1) the approval of surveillance plans, (2) the training and specialization of contract administrators, and (3) the training and operation of the quality assurance evaluators.

Research questions 3 and 4 addressed the identification of current and impacted skills and skill mix within the contract administration activity. The skills identified were those associated with quality assurance. Within the contracting office, the contracting officer and the contract administrators required additional training in quality assurance necessary to oversee and approve the specialized

administrative activities required in accordance with AFR 400-28. The QAE's specialization of skills was considered appropriate if supported by a large number of applicable service contracts to meet the criteria of the GS-1910 job series.

Research question number 5 concerned the identification of the current organizational placement of the administration of service contracts within the base environment. Depending on the size of the office, contract administration can either be combined with or separated from the base buying activities.

Research question number 6 required the development of an organizational model based on the results of the impact analysis. The organizational model identified the need for specialization of functions and skills within contract administration. It also pointed out the need for the specialization and centralization of the QAE activities. The location of the centralized office was proposed as being within the base contracting activity. This location was proposed to minimize potential conflicts of interest between the requirements and the quality assurance aspects of a QAE's current job.

Research question 7 addressed itself to a test of the application of the generalized model to the 2750 ABW. The adapted model was examined in light of a recently concluded test of the AFR 400-28 methodology at the food

service facility and by interviews with selected functional area chiefs. The result of interviews was the recognition of the problem, but of limited support for any organizational change without assurance of the limited impact on performance and the substantiation of manpower savings.

In summary, then, the examination of the impact of AFR 400-28 on the base contract administration of service contracts identified several impacts on that office. It also identified impacts on the training support available and the inspection function currently performed for the contracting office by the functional or requiring office. That impact, it was proposed, could be absorbed by the restructuring of the quality assurance and administrative functions to allow specialization in those areas as a method of minimizing the training and operational impacts identified by the investigations associated with this thesis.

Summary

Following the identification of impacted functions, skills, and skill mix, the use of the Drucker's methodology allowed the organizational placement of the key job or function, identified by a detailed analysis of AFR 400-28, to be examined in a logical and workable manner. This examination was done through the consideration of contribution, decision-making capability, and the relationships of the identified key activities or functions. One result was to

identify the conflict between the decision-making capability and the minimization of relationships criteria. This conflict was resolved in the model after considering the impact of each alternative organizational position on the personnel associated with the job's performance. The key result of this analysis was to utilize organizational placement while still providing a highly enriched job minimizing the relationships associated with the final location of the job.

Corollary Findings

During the examination of the regulations and the interviews it became apparent that the regulation would have a significant impact on the total contracting organization. The creation of the statement of work and the contractor's education as to the likely impact on his performance must be emphasized and explained if the government is to avoid unnecessary legal disputes and appeals. Additionally, the contractor must be made to recognize that the government will not provide the management expertise necessary to manage a contract as has been done in the past. Thus, actual contract performance might be in danger if this problem is not recognized.

Areas of Future Study

The creation of a manpower model recognizing the variations in the type of contract administered and the separation of the inspection function is one area for future

study suggested by the findings of this thesis. Another area is the publication of guidance in the establishment of the appropriate acceptable level of quality (AQL) for service contracts.

Finis

The completion of the additional research projects along with the completion of other test implementations of AFR 400-28 should further expand our knowledge of the suitability and adaptability of quality assurance methods within the base contracting environment.

APPENDICES

APPENDIX A
GLOSSARY

Functional Area Chief--local, base or installation director or chief of civil engineer, transportation, maintenance, supply, services or similar activity receiving contract service support (AFR 400-28).

Job Analysis--the act of looking at a job as it is being done by the Air Force or a contractor to determine what actually results. Job analysis looks at organization, workload, performance, values, and resources (AFR 400-28).

Quality Assurance--a planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product conforms to established technical requirements (MIL-STD 109B).

Quality Assurance Evaluation Program--the plans and procedures developed by HQ USAF, MAJCOMs and Commanders to objectively evaluate contractor performance to find out if the contract service is acceptable (Proposed Revision to AFR 70-9).

Quality Assurance Evaluator (QAE)--an individual selected and certified as functionally qualified by the functional area chief to evaluate and accept contractor performance. If more than one QAE is appointed, designate a chief QAE (Proposed Revision to AFR 70-9).

Quality Control--a management function whereby control of quality of raw or produced material is exercised for the purpose of preventing production of defective material (MIL-STD 109B).

Technical Representative of the Contracting Officer--an individual nominated and certified as functionally qualified by the functional area chief and designated by the local commander to monitor contractor performance and to accept the services for the government (AFR 70-9, 9 Jan 1976).

APPENDIX B
FORMAT OF PERSONAL INTERVIEWS

This guide was used to present the organizational model to selected Division Chiefs. The interview was conducted in a semi-structured manner. The primary use of this guide was to evaluate the organizational structure model developed by this thesis.

1. INTRODUCTION QUESTIONS

- a. Position of and function of interviewee
- b. Thesis subject--state
- c. Thesis problem--state
- d. Thesis methodology--explain
- e. Thesis organizational model--explain

2. SPECIFIC QUESTIONS TO THE INTERVIEWEE

a. I have presented to you a model of the organizational changes resulting from implementation of this new regulation on the contract administration branch of the Contracting Division. I believe you have been involved in this area either through the evaluation of past contractor performance or through the development of surveillance plans for new solicitations. To date, what is your view of this situation with respect to its impact on people working in your division and their functions?

b. What future impact do you see from the implementation of this regulation?

c. What impact do you see on the functions of the contract administration office?

d. What impact do you see on the organization of the contract administration office?

e. Do you have any opinions as to who should perform a particular action under the new regulation?

f. If consolidation of activities would decrease total manpower requirements while decreasing your manpower allotment, how would you view this?

g. If the manpower effect is less than one person, what problem do you see in combining this requirement with other smaller inspection requirements to create an inspection branch under Contract Administration?

h. Now that we have discussed the presented model, do you have any other comments or other areas of interest?

APPENDIX C
INTERVIEW SOURCES

1. Commander, 2750 ABW Civil Engineering Squadron
2. Chief, Base Services Division, 2750 ABW
3. Deputy Chief, Contracting Division, 2750 ABW

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